

Attorney Docket No.: RTS-0139
Inventors: Baker and Cowser
Serial No.: 10/035,485
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REMARKS

Claims 1, 2 and 4-14 are pending in the instant application. Claims 1, 2 and 4-14 have been rejected. Claim 11 has been canceled. Claim 1 has been amended. No new matter has been added by these amendments. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Rejection of Claims Under 35 U.S.C. 102/103

Claims 1, 2 and 11 have been rejected under 35 U.S.C. 102(b) or 103(a) as being anticipated by or obvious over Farr et al. (US Patent No. 5,811,231). The Examiner suggests that this patent discloses a 20 mer primer that is the reverse complement (antisense) to nucleotides 49-68 of SEQ ID NO: 3 of the instant application and that this compound meets all of the structural requirements of the claim and is expected to hybridize with and inhibit expression of matrix metalloproteinase 1. Applicants respectfully traverse this rejection.

Applicants have amended claim 1 to recite that the compounds of the instant invention are targeted to a specific region within the sequence of SEQ ID NO: 3 that does not include the region targeted by the primer of Farr et al. Support for this amendment

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to the claims can be found throughout the specification as filed, but in particular at pages 81-82, Table 1.

Farr et al. (US Patent No. 5,811,231) disclose a single 20 mer primer that is complementary to nucleobases 48 through 69 of SEQ ID NO: 3 of the instant application and which comprises SEQ ID NO: 12 of the instant application. Nowhere does this patent teach or suggest compounds as now claimed which are targeted to a specific region of matrix metalloproteinase 1 of SEQ ID NO: 3. It must be pointed out, however, that the fact that a primer may hybridize to the sequence of the instant invention is not the same as teaching use of specific antisense oligonucleotides for successful antisense inhibition of s gene as is taught in the specification as filed. MPEP 2131 states that in order to anticipate an invention the reference cited must teach each and every limitation of the claims. This reference fails to teach the limitations of the claims as amended and withdrawal of this rejection is respectfully requested.

II. Rejection of Claims Under 35 U.S.C. 103(a)

Claims 1, 2 and 4-14 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Khaw et al. (US Patent No. 6,379,667 B1), in view of Brinckerhoff et al. (1987) and Monia et al. (US

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Patent No. 6,114,517). The Examiner suggests that it would have been *prima facie* obvious for one of ordinary skill to modify the teachings of Khaw et al. with the teachings of Brinckerhoff et al. and Monia et al. to design the compounds of the instant invention as Khaw et al. teach the general idea of antisense to the gene target of the present invention while Brinckerhoff et al. teach the sequence of the gene and Monia et al. teach the idea of antisense to known target genes. The Examiner suggests that motivation is provided by the teachings of Khaw et al. in stating the use of antisense, while Monia et al. provide the motivation for using modifications to oligonucleotides. Applicants respectfully traverse this rejection.

At the outset, as discussed *supra*, the claims have been amended to recite compounds targeted to a specific region within the sequence of SEQ ID NO: 3 to be targeted by antisense. This region was shown in the specification as filed to be successfully targeted by antisense compounds as shown in Table 1.

Khaw et al. disclose only the idea of using antisense compounds to inhibit expression of matrix metalloproteinase 1. Nowhere does this patent teach or suggest compounds as claimed which are targeted to a specific region of SEQ ID NO: 3.

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Therefore, this primary reference fails to teach or suggest the invention of the amended claims.

The secondary references cited fail to overcome the deficiencies in teaching of the primary reference.

Brinckerhoff et al. (1987) disclose only the sequence of matrix metalloproteinase 1 and its expression in cell lines. Nowhere does this paper teach or suggest compounds as claimed which are targeted to a specific region of SEQ ID NO: 3 and which are capable of inhibiting expression of SEQ ID NO: 3. Therefore, this reference, either alone or when combined with the primary reference cited, fails to teach or suggest the invention of the amended claims.

Monia et al. disclose antisense compounds targeted to tumor necrosis factor-alpha signaling molecules. No other antisense compounds of any type are taught or suggested by this patent. Nowhere does this patent teach or suggest compounds as claimed which are targeted to a specific region of SEQ ID NO: 3. Therefore, this reference, either considered alone or when combined with the other cited references, fails to teach or suggest the invention of the amended claims.

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To establish a *prima facie* case of obviousness, three basic criteria must be met. MPEP 2143. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art must teach or suggest all claim limitations. Clearly, the combination of prior art cited fails to establish a *prima facie* case of obviousness. First, the primary references and the secondary references, when combined, fail to teach or suggest the invention of the amended claims which are compounds targeted to a specific region within the sequence of SEQ ID NO: 3. Further, it is only with the specification in hand that one of skill would be able to know that these particular type of compounds could be used successfully to inhibit expression of SEQ ID NO: 3; the combination of references fail to provide one of skill with an expectation of success without the teachings of the specification in hand. Thus, this combination of prior art fails to establish a *prima facie* case of obviousness and withdrawal of this rejection is respectfully requested.

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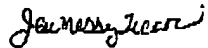
III. Rejection of Claims Under 35 U.S.C. 112, First Paragraph

Claim 11 has been rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed invention. Claim 11 has been canceled making this rejection moot. Withdrawal of this rejection is therefore respectfully requested.

IV. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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